

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A data collection assembly module, comprising:

a) a support having a predetermined form factor;

b) a first auto ID reader supported by the support, said first auto ID reader operative for sensing encoded data on a first type of record carrier positioned near the first auto ID reader and for reading the encoded data;

c) a second auto ID reader supported by the support, said second auto ID reader operative for sensing encoded data on a second type of record carrier configured to contact a portion of said second auto ID reader, said second auto ID reader further operative for reading the encoded data; and

d) a radio frequency (RF) transceiver supported by the support, and operative for transmitting the data processed by said auto ID readers derived from the record carriers;

wherein at least one of said first and second auto ID reader is an interchangeable module that can be interchanged with modules including: a bar code symbol reader module, a smart card reader module, a digital sensor module, a biometric sensor module, a magnetically encoded data reader module, an RFID reader module, and an optical code reader module.

2. (Currently Amended): The data collection assembly module of claim 1, wherein the form factor occupies a space approximately 1-½ inch x 1 inch x ¼ inch.

3. (Currently Amended): The data collection assembly module of claim 2, wherein the support includes a printed circuit board on which electrical circuit components for the RF transceiver are mounted.

4. (Currently Amended): The data collection assembly module of claim 1, wherein the RF transceiver includes a first antenna, a second antenna, and a selection circuit for coupling the transceiver.

5. (Canceled)

6. (Currently Amended): The data collection assembly module of claim 1, wherein the RF transceiver and at least one auto ID reader are supported within the predetermined form factor.

7. (Currently Amended): The data collection assembly module of claim 1, wherein the RF transceiver and the auto ID readers generate digital signals corresponding to RF demodulated data and the auto ID encoded data, respectively, and wherein the readers share a single IC for receiving and processing the digital signals.

8. (Currently Amended): A portable data collection terminal, comprising:

a) a hand-held housing;

b) a support supported by the housing and having a predetermined form factor;

c) a radio frequency (RF) transceiver supported by the support, and operative for communicating with a RF base station associated with a computer network for transferring data between the terminal and the network; and

d) a first and a second auto ID reader supported by the support, and operative for sensing encoded data in a first and a second data carrier of different types, respectively, and for reading the encoded data, wherein at least one of said first and second auto ID reader is an interchangeable module that can be interchanged with modules including a bar code symbol reader module, a smart card reader module, a digital sensor module, a biometric sensor module, a magnetically encoded data reader module, an RFID reader module, and an optical code reader module.

9. (Original): The data collection terminal of claim 8, wherein the form factor occupies a space for an SE 1200 scan engine.

10. (Original): The data collection terminal of claim 8, wherein the support includes a printed circuit board on which electrical circuit components for the RF transceiver and auto ID readers are mounted.

11. (Previously Entered): The data collection terminal of claim 8, wherein the RF transceiver includes a first antenna, a second antenna, and a circuit for modulating and demodulating an RF signal.

12. (Previously Entered): The data collection terminal of claim 8, wherein at least one auto ID reader includes a photodetector.

13. (Previously Entered): The data collection terminal of claim 8, wherein the RF transceiver and at least one of the first and second auto ID readers are supported within the predetermined form factor.

14. (Currently Amended): The data collection terminal of claim 8, wherein the RF transceiver and the auto ID readers generate digital signals corresponding to an RF signal and the auto ID encoded data, respectively, and wherein the readers share a common processing integrated circuit for receiving and processing the digital signals, and for outputting the processed signals through at least one common interface.

15. (Currently Amended): A data collection method, comprising the steps of:

a) supporting a radio frequency (RF) transceiver on a support having a predetermined form factor;

b) supporting a first and a second auto ID reader on said support, wherein at least one of said first and second auto ID reader is an interchangeable module that can be interchanged with modules including a bar code symbol reader module, a smart card

reader module, a digital sensor module, a biometric sensor, a magnetically encoded data reader, an RFID reader, and an optical code reader;

c) sensing encoded data on a record carrier positioned near or in contact with one of the first and second readers and reading the encoded data; and

d) transmitting the data processed by one of the first and second auto ID readers by the transceiver.

16. (Previously Entered): A method as defined in claim 15, wherein the first auto ID reader is a bar code reader and the second auto ID reader is a smart card reader.

17. (Previously Entered): A method as defined in claim 15, further comprising processing the data from the RF transceiver and the data from the auto ID readers in a common signal processing circuit.

18. (Original): A method as defined in claim 17, wherein said common signal processing circuit is implemented in a single integrated circuit.

19. (Previously Entered): A method as defined in claim 17, wherein the data from the auto ID readers is transmitted from the signal processing circuit directly to the RF transceiver for wireless transmission to an external communications network.

20. (Original): A method as defined in claim 15, wherein the RF transceiver provides wireless communications to an external computer network using the Bluetooth protocol.

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (New): The data collection module of claim 1,
wherein the first auto ID reader generates first signals relating to the sensing by the first auto ID reader;
wherein the second auto ID reader generates second signals relating to the sensing by the second auto ID reader;
wherein the RF transceiver receives and processes signals transmitted from a remote station and generates third signals relating to the processing by the RF transceiver;
and
wherein the data collection module further comprises signal processing circuitry including shared circuitry for processing and digitizing at least two of the first, second and third signals.

26. (New): The data collection module of claim 25, wherein the shared circuitry processes the first, second and third signals.

27. (New): The data collection module of claim 1,
wherein the first auto ID reader generates first signals relating to the sensing by the first auto ID reader;
wherein the second auto ID reader generates second signals relating to the sensing by the second auto ID reader; and
wherein the data collection module further comprises signal processing circuitry including shared circuitry for processing and digitizing the first and second signals.

28. (New) The data collection module of claim 1,
wherein the first auto ID reader generates first signals relating to the sensing by the first auto ID reader;
wherein the second auto ID reader generates second signals relating to the sensing by the second auto ID reader;
wherein the data collection module further comprises signal processing circuitry for processing and digitizing at least one of the first and second signals; and
wherein the signal processing circuitry can further provide the digitized signals to the RF transceiver for transmission by the RF transceiver to at least one remote computer or to a digital processing device for further processing in accordance with an algorithm.

29. (New): The portable data collection terminal of claim 8,
wherein the first and second auto ID readers generate first and second signals
relating to the sensing by the first and second auto ID readers, respectively;
wherein the RF transceiver receives and processes signals transmitted from the RF
base station and generates third signals relating to the processing by the RF transceiver;
and
wherein the portable data collection terminal further comprises signal processing
circuitry including shared circuitry for processing and digitizing at least two of the first,
second and third signals.

30. (New): The portable data collection terminal of claim 29, wherein the shared
circuitry processes the first, second and third signals.

31. (New): The portable data collection terminal of claim 8,
wherein the first and second auto ID readers generate first and second signals,
respectively, relating to the sensing by the first and second auto ID readers, respectively;
and
wherein the portable data collection terminal further comprises signal processing
circuitry including shared circuitry for processing and digitizing the first and second
signals.

32. (New): The portable data collection terminal of claim 8,
wherein the first and second auto ID readers generate first and second signals,
respectively, relating to the sensing by the first and second auto ID readers, respectively;
wherein the portable data collection terminal further comprises signal processing
circuitry for processing and digitizing at least one of the first and second signals; and
wherein the signal processing circuitry further can provide the digitized signals to
the RF transceiver for transmission by the RF transceiver to the base station or to a digital
processing device for further processing in accordance with an algorithm.

33. (New): The data collection method of claim 15, further comprising the
steps of:
generating signals upon sensing of the encoded data by the first and the second
auto ID readers;
receiving RF signals transmitted from a remote station by the RF transceiver;
processing the received RF signals by the RF transceiver;
generating signals by the RF transceiver relating to the processing; and
processing and digitizing the signals generated by at least two of the first and
second auto ID readers and the RF transceiver by shared signal processing circuitry.

34. (New): The data collection module of claim 33, wherein the processing and
digitizing step includes processing and digitizing the signals generated by the first and
second auto ID reader and the RF transceiver.

35. (New): The data collection module of claim 15, further comprising the steps of:

generating signals upon sensing of the encoded data by the first and the second auto ID readers; and

processing and digitizing the signals generated by the first and second auto ID readers by shared signal processing circuitry.

36. (New): The data collection module of claim 15, further comprising the steps of:

generating signals upon sensing of the encoded data by the first and the second auto ID readers;

processing and digitizing the generated signals; and

providing the digitized signals directly to the RF transceiver for transmission by the RF transceiver to at least one remote computer.

37. (NEW): A data collection assembly, comprising:

a) a support having a predetermined form factor;

b) an auto ID reader supported by the support, and operative for sensing encoded data on a record carrier positioned near or in contact with the reader and for generating first signals relating to the sensing;

c) a radio frequency (RF) transceiver supported by the support, and operative for receiving and processing data from a remote source and generating second signals relating to the processing; and

d) signal processing circuitry including shared circuitry for processing and digitizing the first and second signals.

38. (NEW): A data collection module, comprising:

- Cont*
- a) a support having a predetermined form factor;
 - b) an auto ID reader supported by the support, and operative for sensing encoded data on a record carrier positioned near or in contact with the reader, processing the sensed data and for generating signals relating to the sensing;
 - c) signal processing circuitry supported by the support, and operative for processing and digitizing the signals relating to the sensing; and
 - d) a radio frequency (RF) transceiver supported by the support, and operative for receiving the digitized data directly from the signal processing circuitry and transmitting the digitized data to at least one remote computer or to a digital processing device for further processing in accordance with an algorithm.

39. (NEW): A data collection method, comprising the steps of:

- a) supporting a radio frequency (RF) transceiver on a support having a predetermined form factor;
- b) supporting an auto ID reader on said support;
- c) sensing encoded data on a record carrier positioned near the reader and reading the encoded data;
- d) generating signals upon sensing of the encoded data;

- e) receiving RF signals transmitted from a remote station by the RF transceiver;
- f) processing the received RF signals by the RF transceiver;
- g) generating signals by the RF transceiver relating to the processing; and
- h) processing and digitizing the signals generated by the auto ID reader and the RF transceiver by shared signal processing circuitry.

40. (NEW): A data collection method, comprising the steps of:

- a) supporting a radio frequency (RF) transceiver on a support having a predetermined form factor;
- b) supporting an auto ID reader on said support;
- c) sensing encoded data on a record carrier positioned near the reader and reading the encoded data;
- d) generating signals upon sensing of the encoded data by the first auto ID reader;
- e) processing and digitizing the generated signals; and
- f) providing the digitized signals directly to the RF transceiver for transmission by the RF transceiver to at least one remote computer.